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The area surrounding the world-famous geoarchaeological site Mal'ta (Baikal Siberia): New data on the chronology, archaeology, and fauna

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ABSTRACT

New investigations performed on the area around the famous Palaeolithic site of Mal'ta (Baikal Siberia) shed new light on the complete sequence of the deposits enclosing the site. Changes in the human habitat are traced through MIS 5 to MIS 2; the initial cluster of artefacts and faunistic remains of MIS 3 age is found *in situ*. Cultural layers of older age have been newly discovered The full faunal biodiversity, including three mollusc species, one fish species, three bird species, two species of Eulipotyphla, three Lagomorpha species, fourteen rodents and four large mammal species, has been established within time intervals corresponding to MIS 5, MIS 3, and MIS 2.

1. Introduction

The famous Palaeolithic site of Mal'ta (53° N, 103° E) is on the Belaya River at the settlement of the same name in the Usolsky district, Irkutsk Region, 100 km northwest from Irkutsk City and within a distance of 160 km from Lake Baikal (Fig. 1). This site is renowned for numerous objects of Palaeolithic art, mostly stored in the Hermitage Museum, St.-Petersburg. The classical cultural layer is associated with the Sartanian horizon (MIS 2) dated using a radiocarbon method in the range of 23–21 ka BP (Table 1) Medvedev et al., 1996, 2001). The Mal'ta site has consistently attracted considerable attention from the scientific community since its discovery approximately 89 years ago (Gerasimov, 1931, 1935, 1941, 1958, 1961; Medvedev et al., 2001; Salmony, 1931; Filipp, 1966; Leroi-Gourhan, 1988; Bray and Trump, 1990). General interest increased still after a gene analysis was performed on a bone fragment from a child burial on the Mal'ta site (Raghavan et al., 2013), which revealed a genetic relationship between those remains on one side and European peoples and American Indians on the other, though no genetic relations with modern East Asian populations were traced.

The purpose of our research was to find convincing evidence of the multilayered settlement of the Mal'ta area by humans and to reconstruct the palaeoenvironmental evolution in the surroundings of Mal'ta site during Kazantzevo (MIS 5), Karginian (MIS 3) and

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